

WHAT IS CLAIMED IS:

1. An electronic camera comprising:
an imaging element which photo-electrically
converts an object field light;

5 a timing generator including an internal register
in which timing of a drive signal used to operate the
imaging element can be programmed;

a power supply control portion which supplies a
second voltage to the imaging element when a predeter-
10 mined time has elapsed after supply of a first voltage
to the timing generator; and

a control portion which starts at least program
setting in the internal register of the timing
generator after elapse of a time that the timing
15 generator requires to operate stably at the first
voltage and before elapse of a time that the imaging
element requires to operate stably at the second
voltage.

2. The electronic camera according to claim 1,
20 wherein, in the program setting in the internal
register of the timing generator, the control portion
sets timing of the drive signal concerning a monitor
mode prior to any other value.

3. The electronic camera according to claim 2,
25 wherein, in the program setting in the internal
register of the timing generator, the control portion
terminates at least setting of the timing of the drive

signal concerning the monitor mode before an elapse of the time required for the imaging element to start up and perform a stable operation.

4. The electronic camera according to claim 1,
5 wherein, in the program setting in the internal register of the timing generator, the control portion terminates at least setting of the timing of the drive signal concerning the monitor mode before an elapse of the time required for the imaging element to start up
10 and perform a stable operation.

5. An electronic camera comprising:
an imaging element which photo-electrically converts an object field light;

a timing generator including an internal register
15 in which timing of a drive signal used to operate the imaging element can be programmed;

a power supply control portion which supplies a second voltage to the imaging element when a predetermined time has elapsed after supply of a first voltage
20 to the timing generator; and

a control portion which performs program setting in the internal register of the timing generator, reads and verifies a set value after elapse of a time that the timing generator requires to operate stably at
25 the first voltage and before elapse of a time that the imaging element requires to operate stably at the second voltage.

6. An electronic camera comprising:

an imaging element whose handling electric charge quantity can be changed;

5 a voltage control portion which controls a substrate voltage used to change the handling electric charge quantity of the imaging element;

a read portion which controls an operation to take out electric charges stored in each pixel of the imaging element and read them as an image signal to the
10 outside;

an amplification portion which amplifies the image signal read by the read portion; and

a voltage control inhibition portion which inhibits a control over the substrate voltage by the
15 voltage control portion when an amplification factor of the amplification portion is not less than a predetermined value.

7. The electronic camera according to claim 6, wherein the voltage control portion controls the
20 substrate voltage in such a manner that the handling electric charge quantity when performing moving picture display becomes smaller than that when performing still picture display.

8. The electronic camera according to claim 6, wherein the voltage control portion controls the
25 substrate voltage in such a manner that the handling electric charge quantity at the time of field storage

becomes smaller than that at the time of frame storage.

9. An electronic camera comprising:

an n:1 (n is a natural number not less than 3)
interlace read type imaging element which can read
5 electric charges of a plurality of two-dimensionally
arranged photodiodes to the outside through a transfer
path;

an unnecessary electric charge flushing portion
used to transfer unnecessary electric charges stored
10 in the transfer path at a normal speed through the
transfer path;

a signal read portion which reads the electric
charges of the photodiodes to the outside of the
imaging element after flushing the unnecessary electric
15 charges; and

a conversion portion which converts a signal read
by the signal read portion into a video signal,

wherein the unnecessary electric charge flushing
portion transfers the unnecessary electric charges
20 stored in the transfer path at a normal speed through
the transfer path in a period after end of exposure of
the imaging element before reading the electric charges
of the photodiode to the transfer path.

10. The electronic camera according to claim 9,
25 further comprising a clamp portion which clamps a black
level of the video signal while the unnecessary
electric charge flushing portion flushes the

unnecessary electric charges.

11. The electronic camera according to claim 10,
wherein the unnecessary electric charge flushing
portion determines the period to transfer the
5 unnecessary electric charges in accordance with
brightness of an object.

12. The electronic camera according to claim 10,
wherein the electronic camera has a rapid sequence
mode, and the unnecessary electric charge flushing
10 portion sets the period to transfer the unnecessary
electric charges when taking pictures in the rapid
sequence mode shorter than that when transferring the
unnecessary electric charges in any other mode.

13. The electronic camera according to claim 10;
15 wherein the unnecessary electric charge flushing
portion determines the period to transfer the
unnecessary electric charges in accordance with a time
required for a clamp operation of the clamp portion to
be stabilized.

20 14. The electronic camera according to claim 10,
wherein the unnecessary electric charge flushing
portion determines the period to transfer the
unnecessary electric charges based on a longer one of
a time required to completely flush the unnecessary
25 electric charges and a time required for the clamp
operation to be stabilized.

15. The electronic camera according to claim 9,

wherein the unnecessary electric charge flushing portion determines the period to transfer the unnecessary electric charges in accordance with the brightness of an object.

5 16. The electronic camera according to claim 9, wherein the electronic camera has a rapid sequence mode, and the unnecessary electric charge flushing portion sets the period to transfer the unnecessary electric charges when taking pictures in the rapid
10 sequence mode shorter than that when transferring the unnecessary electric charges in any other mode.

17. An electronic camera comprising:

 an $n:1$ (n is a natural number not less than 3) interlace read type imaging element which can read
15 electric charges of a plurality of two-dimensionally arranged photodiodes to the outside through a transfer path;

 an unnecessary electric charge flushing portion used to transfer unnecessary electric charges stored
20 in the transfer path at a normal speed through the transfer path;

 a signal read portion which reads the electric charges of the photodiodes to the outside of the imaging element after flushing the unnecessary electric
25 charges; and

 a conversion portion which converts a signal read by the signal read portion into a video signal,

wherein the unnecessary electric charge flushing portion has a frame period in which the unnecessary electric charges stored in the transfer path are transferred at a normal speed through the transfer path after end of exposure of the imaging element and before reading the electric charges of the photodiodes to the transfer path.

18. The electronic camera according to claim 17, further comprising a clamp portion which clamps a black level of the video signal while the unnecessary electric charge flushing portion is flushing the unnecessary electric charges.

19. The electronic camera according to claim 18, wherein the unnecessary electric charge flushing portion determines the frame period to transfer the unnecessary electric charges in accordance with brightness of an object.

20. The electronic camera according to claim 18, wherein the electronic camera has a rapid sequence mode, and the unnecessary electric charge flushing portion sets the frame period to transfer the unnecessary electric charges when taking pictures in the rapid sequence mode shorter than that when transferring the unnecessary electric charges in any other mode.

21. The electronic camera according to claim 18, wherein the unnecessary electric charge flushing

portion determines the frame period to transfer the unnecessary electric charges in accordance with a time required for a clamp operation of the clamp portion to be stabilized.

5 22. The electronic camera according to claim 18, wherein the unnecessary electric charge flushing portion determines the frame period to transfer the unnecessary electric charges based on a longer one of
10 a time required to completely flush the unnecessary electric charges and the time required for the clamp operation to be stabilized.

 23. The electronic camera according to claim 17, wherein the unnecessary electric charge flushing portion determines the frame period to transfer the
15 unnecessary electric charges in accordance with brightness of an object.

 24. The electronic camera according to claim 17, wherein the electronic camera has a rapid sequence mode, and the unnecessary electric charge flushing
20 portion sets the frame period to transfer the unnecessary electric charges when taking pictures in the rapid sequence mode shorter than that when transferring the unnecessary electric charges in any other mode.